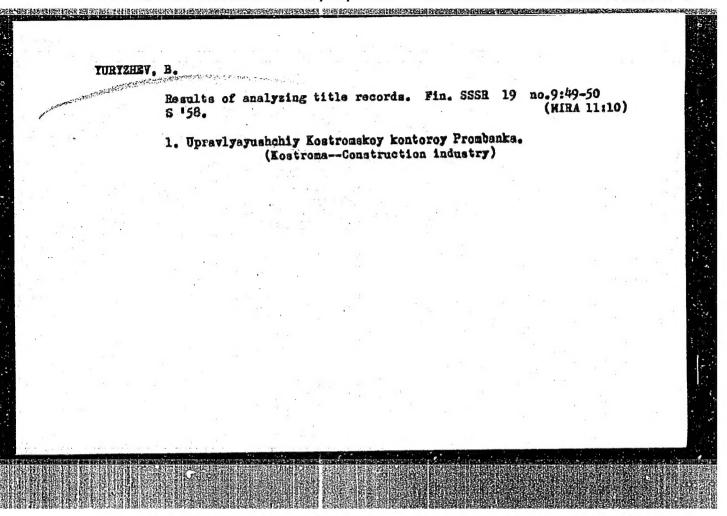
YURYSHEV, A. V. and TURKIN, V. S.

"Technique of Gas Line and Compressor Station Construction in the USSR."

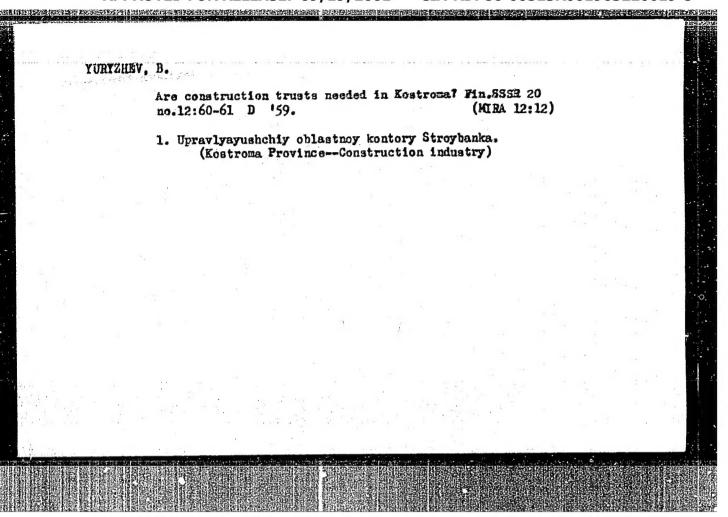
report presented at the Eighth International Gas conference at Stockholm, 28 30 June 61



YUHYZHEV. B.

From practice in analyzing the prospective plan. Fin. SESE 20 no.1:74:76 Ja 159. (MIRA 12:2)

1. Upravlyayushchiy Kostromskoy kontoroy Prombanka.
(Kostroma Province-Roomenic policy)

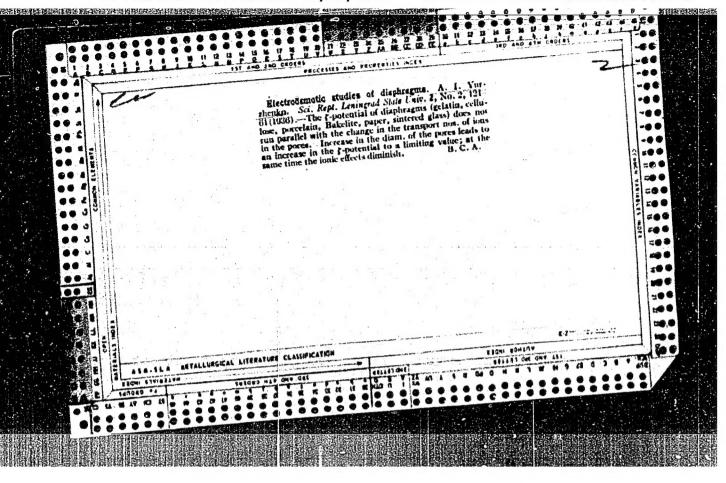


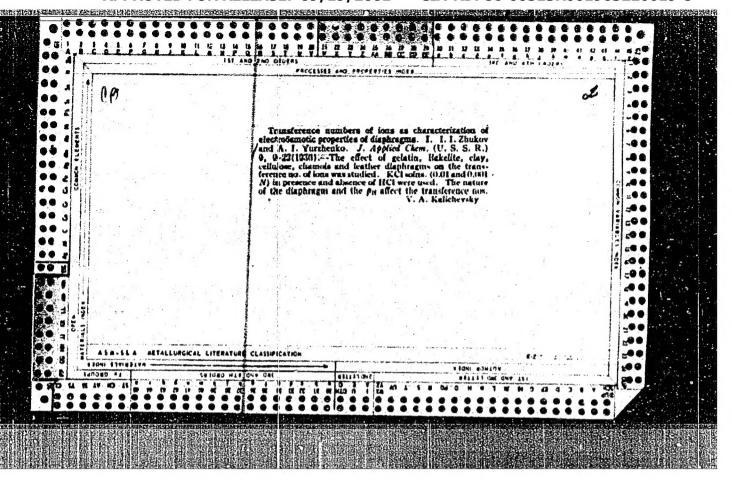
Investigating the effect of the moisture content in Moscow Besin lignite on the composition of gas produced in coal channels. Podzem. gaz. ugl. no.1:39-42 '59. (MIRA 12:6)

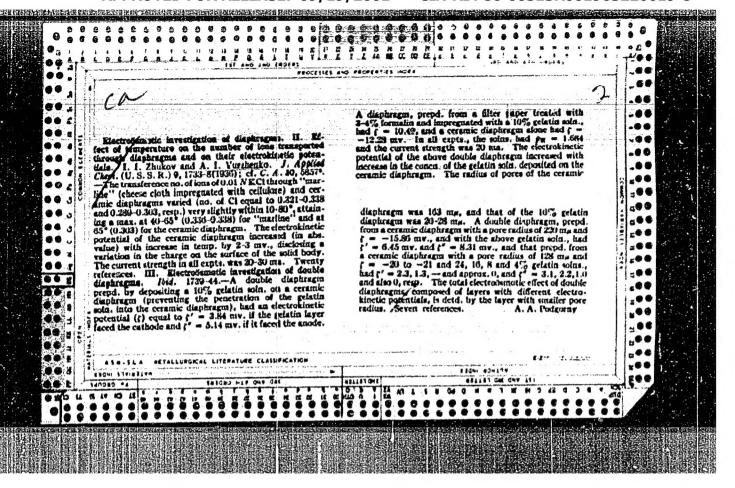
1. Institut goryuchikh iskopayemykh AN SSSR.

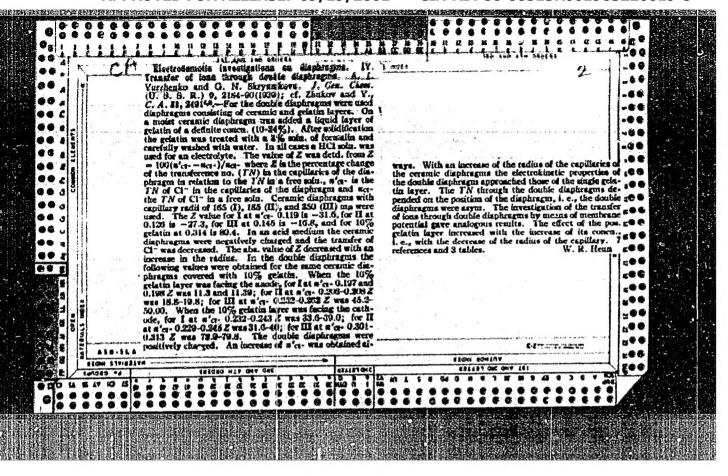
(Moscow Basin-Coal gasification, Underground)

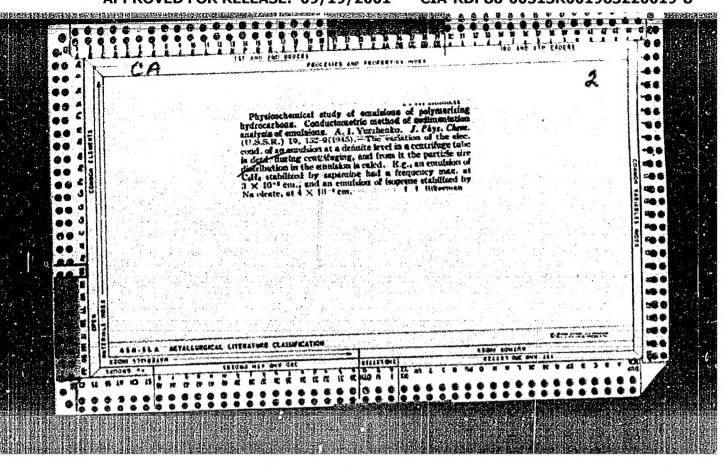
(Lignite-Testing)

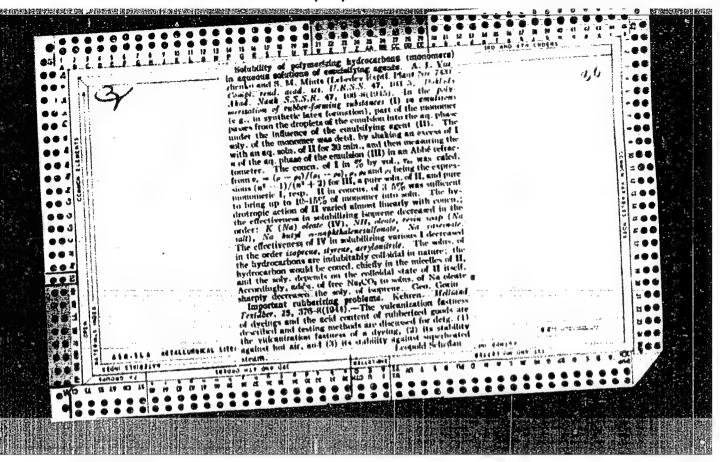


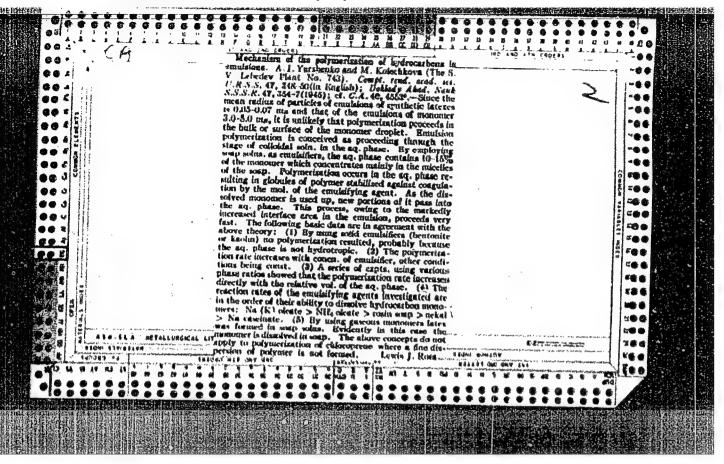


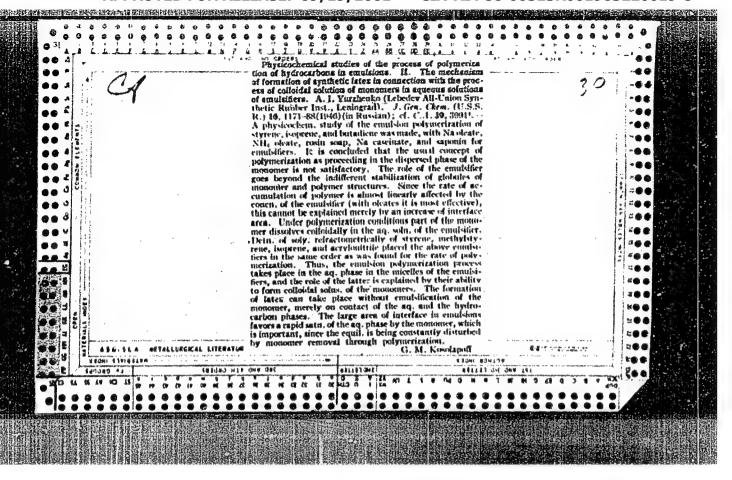










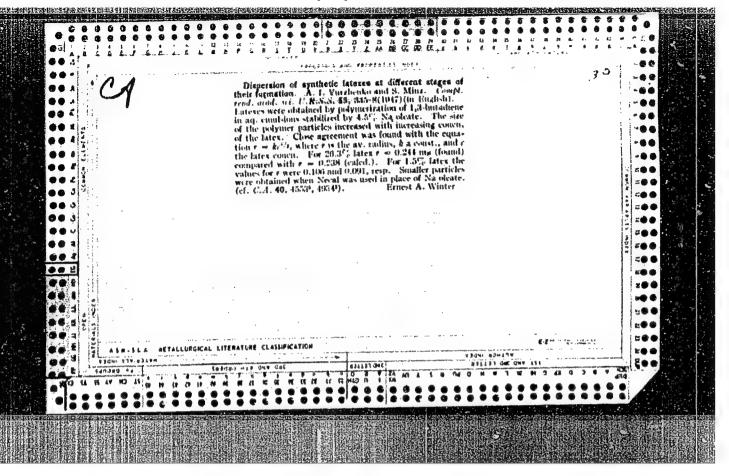


YURZHENKO, A. I. (Cont'd)

"The Mechanism of the Formation of Synthetic Latexes in Connection with the Process of Diffusion Monomers in Aqueous Solutions of an Emulsifier," 1947.

(9900075).

Prize im. Lebedev, 1948, Publ.



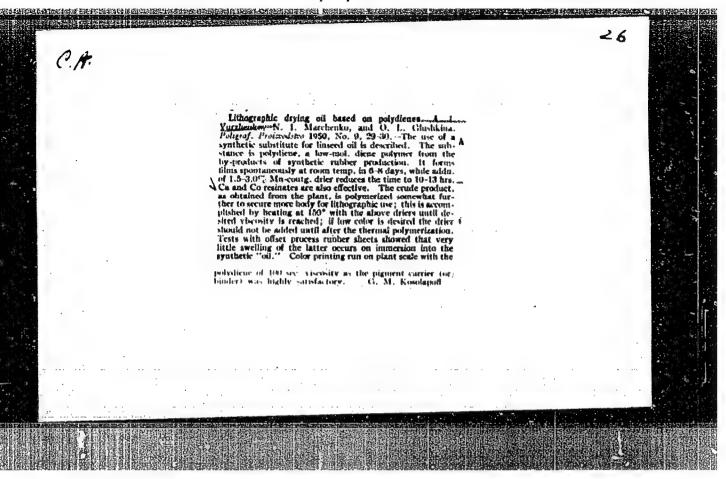
Mechanism of the polymerication of hydrocarbons in smakion. A. I. Verruenko and H. Kones inkove (Compt. rend. acad. sci. U.S.S.R., 1845, 47, 324-76; Doklady, Skad. Nauk U.S.S.R., 1846, 47, 334-7; Chem. Ales, 1946, 49, 4934). Source the mean radius of particles of emulsions of synthetic latices is 0.05 0.07 mg and that of the emulsions of monomer

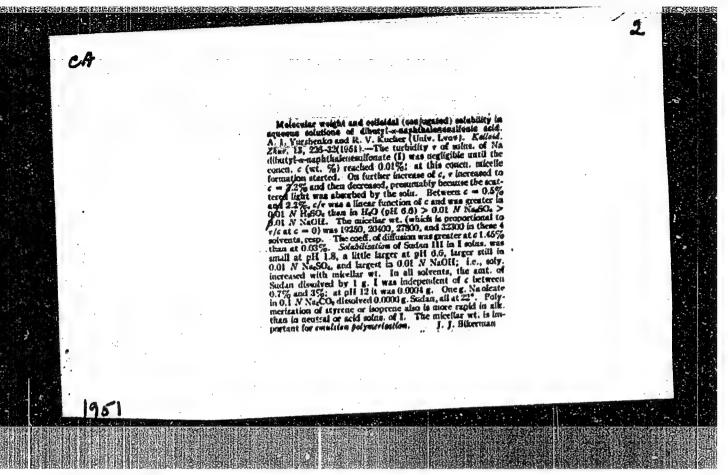
dioplet. Emulsion polymerication is conceived as proceeding through the stage of colloidal solution in the sequence phase. By employing soap solutions as emulsifiers, the aqueous phase contains 10-15% of the monomer which concentrates mainly in the micelles of the soap. Polymerication occurs in the aqueous phase resulting in globules of polymer

3.0 5.0 mp, it is unlikely that polymerication proceeds in the bulk or surface of the monomer

33 Synthetic Rubbn and Olliel. Products 20 Polymon from Hydrox

stabilised against congulation by the molecule of the countilying agent. As the dissolved monomer is used up, new portions of it pass into the aqueous phase. This process, owing to the markedly increased interface area in the emulsion, proceeds very fast. The following basic data are in agreement with the above theory. (i) By using solid emulsifiers (heatonite or kaolin) no polymerization resulted, probably because the aqueous phase is not hydrotropic. (ii) The polymerization rate increases with concentration of emulsifier, other conditions being constant. (iii) A series of experiments using various phase ratios showed that the polymerization rate increases directly with the relative volume of the aqueous phase. (iv) The reaction rates of the emulsifying agents investigated are in the order of their ability to disorder hydrocation magniness. (v) By using gaseous monomers lates was formed in susp solutions. Evidently in this case the monomer is disorded in soap. The above concepts do not apply to polymerization of charaptene where a fine dispersion of polymer is not formed. \$221123

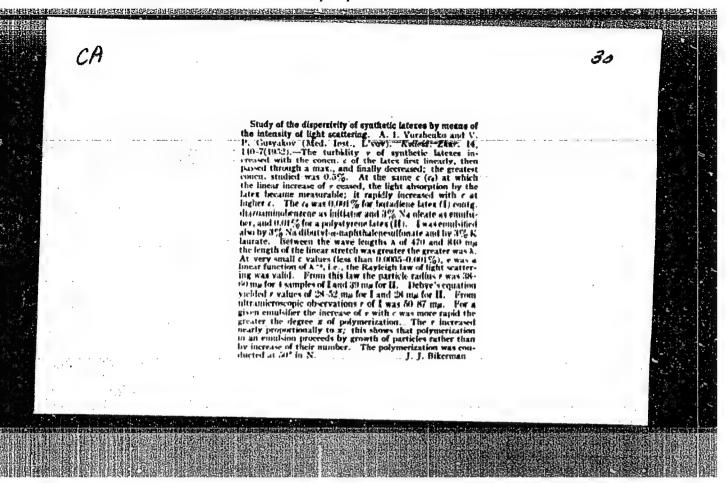


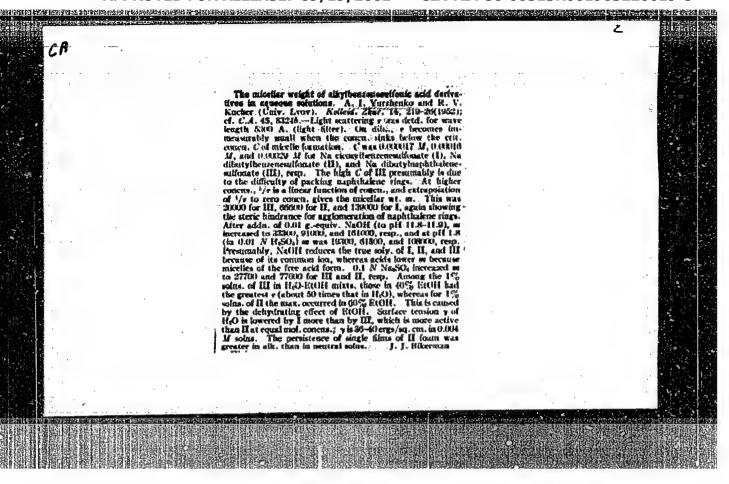


YURZHENKO, A. I.: GUSYAKOV. V. P.

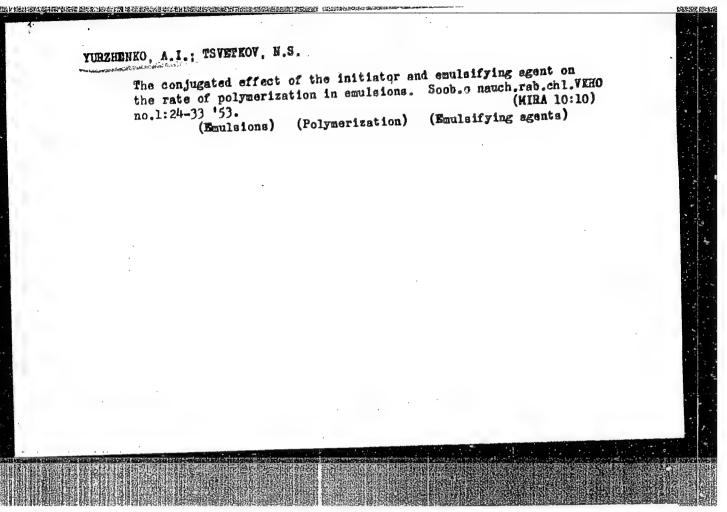
Emulsions

Effect of the concentration and nature of an emulsifier on the degree of dispersion of latexas. Dokl. AN SSSR, no. 1, 1952.

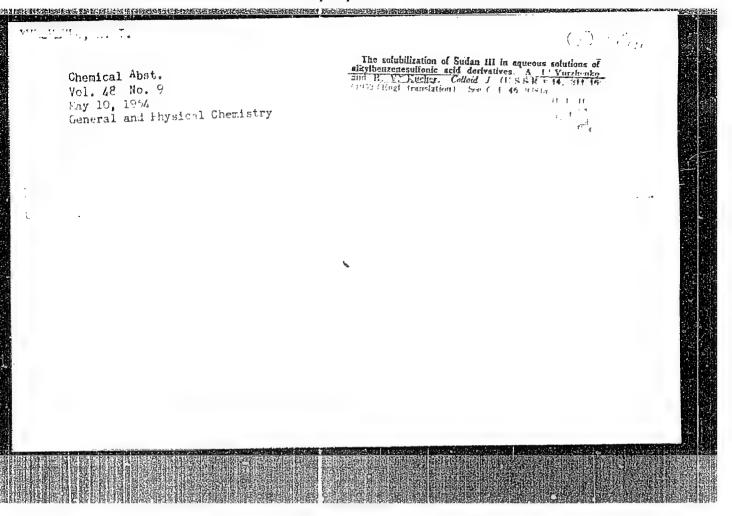




	irant; YURZHENKO, A.I.,		
Effect of p of styrene *52.	remoter concentration of in an emulsion. Dop.ts	in the speed of po pov.L'viv.un. no	lymerization .3 pt.2:33-34 (KLRA 9:11)
	(Styrene) (Polymers	and polymerisatio	n)
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APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001963220019-8"



- 1. GUSA OVA, V. P.; YURZHENKO, A. I.
- 2. USSR (600)
- 4. Dispersion
- 7. Study of the dispersion of synthetic latexes in relation to the nature and concentration of the emulisifier and monomer, Koll. zhur., 14, No. 6, 1952.

9. Monthly List of Russian Accessions, Library of Congress, March, 1953. Unclassified.

TURZHENKO, A.I., professor; KUCHER, R.V., assistent.

Study of the speed of diffusion of colloidal electrolytes in aqueous solutions. Dop.ta pov.L'viv.un. no.3 pt.2:35-36 '52. (MLRA 9:11)

(Electrolytes) (Diffusion)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001963220019-8"

YURZHENKO, A.I., professor; GUSYAKOV, V.P., assistent.

Study of dispersion of synthetic latexes in relation to the nature and concentration of the emulsifier and the monomer.

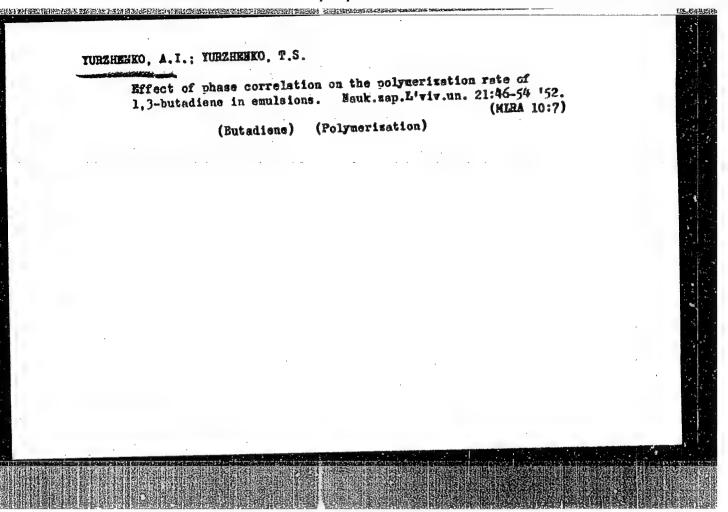
Dop.ta pov.L'viv.un. no.3 pt.2:36-37 52. (MLRA 9:11)

(Latex)

YURZHENKO A I

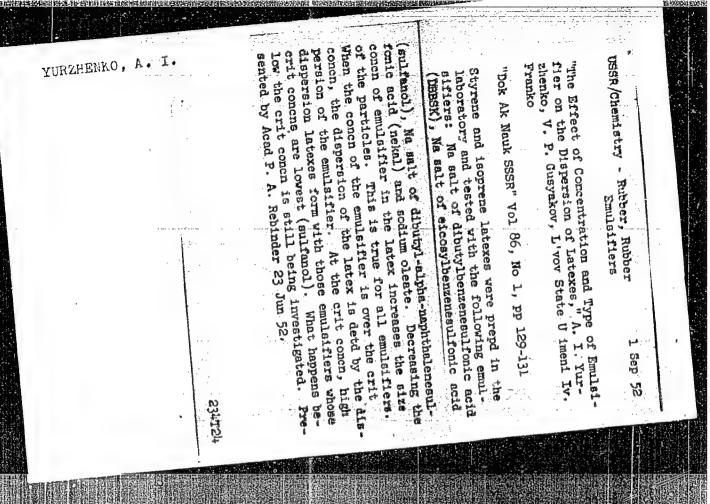
Investigating the double refraction in s stresm of solutions of emuleified polymers of 1,3-butadiene. Hauk.map.L'wiv.un. 21:36-45 '52. (MIRA 10:7)

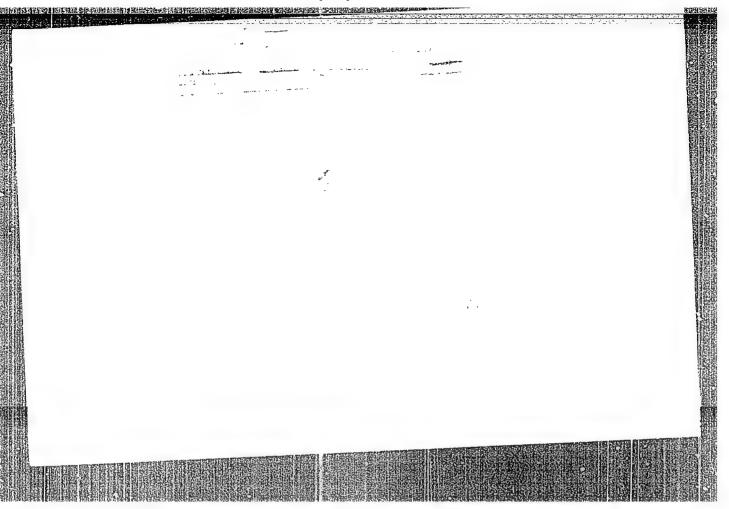
1. Kafedra fizicheskoy i kolloidnoy khimii.
(Refraction, Double) (Butadiene)



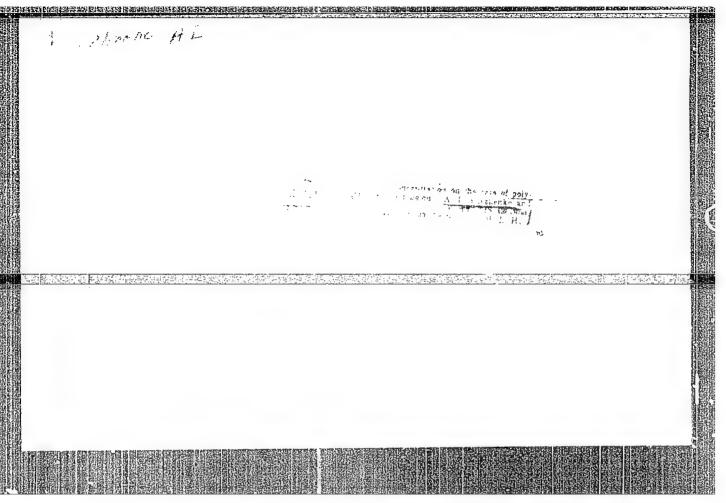
4 F	rious pH of water and initiators used were potassium initiators used were potassium initiators, hydrogen peroxide mylcarbinol hydrogen peroxide nylcarbinol hydrogen peroxide.  239  le type of initiator, the polymetry of initiator, the polymetry of initiator, the polymetry of them slows sown. This or, but then slows sown. This or, but then slows sown. This results in shifting the max transaction of initiator. Since the control of initiator.	peroxice Concestymerically Tevents S. Tevents, No 5	

fonated cmulsificonjugated solul conjugated solul conjugated solul nees, surface as orption layers, orption layers, on polymerization from of the Walfonic acid, Malfonic acid, The cultic acid, Malfonic	"The Weights of Properties of S Yurzhenko and H I. Franko "DAN SSSR" Vol	USSR/Chemistry
	Micelles and some Colloid Ifonated Emulsifiers, A A Ifonated Emulsifiers, A No 6, p. 1337-1340  35, No 6, p. 1337-1340  sifiers were studied with the strange of the micelles of the micelles of the micelles of the sifiers were studied with the sifiers were studied with the strange of the studied with the sifiers were studied with the s	stry - Emulsifiers Aug 52





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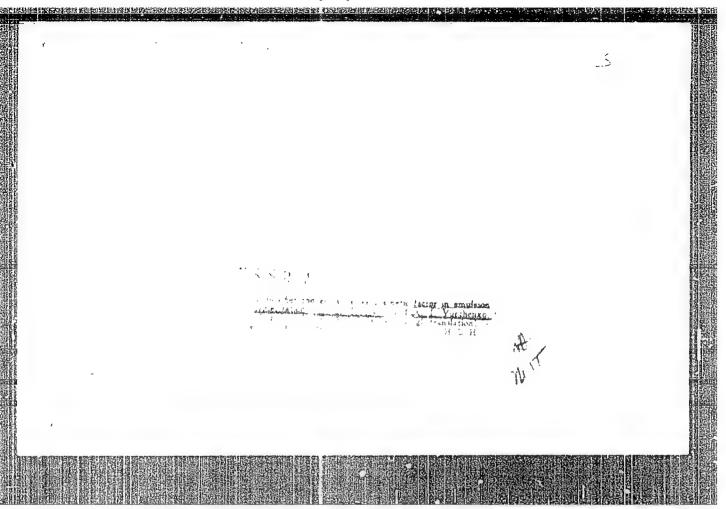


APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001963220019-8"

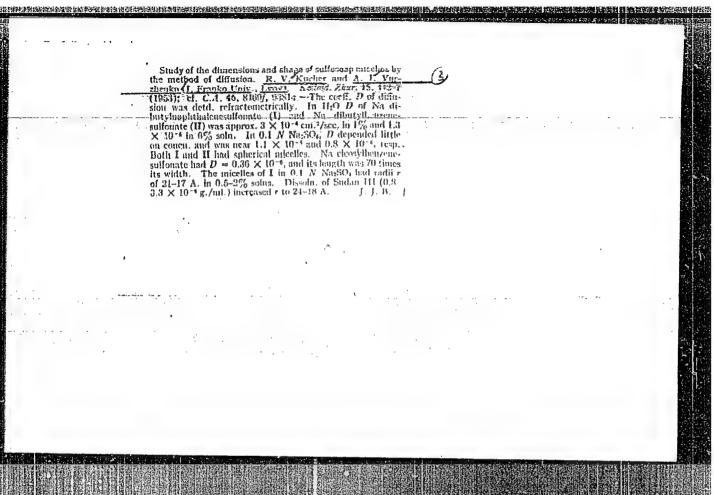
TSVETKOV, N.S.; YURZHENKO, A.I.

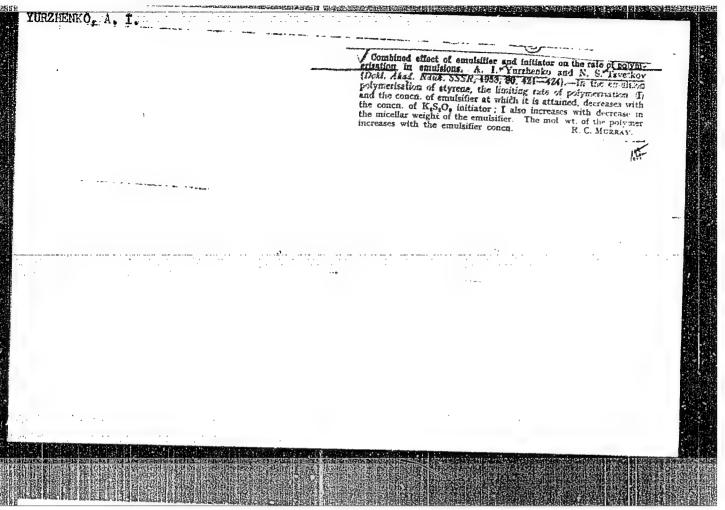
Concentration of the emulsifier as a kinetic factor during polyserization in emulsions. Koll.zmr. 15 no.4:308-315 '53. (MLRA 6:8)

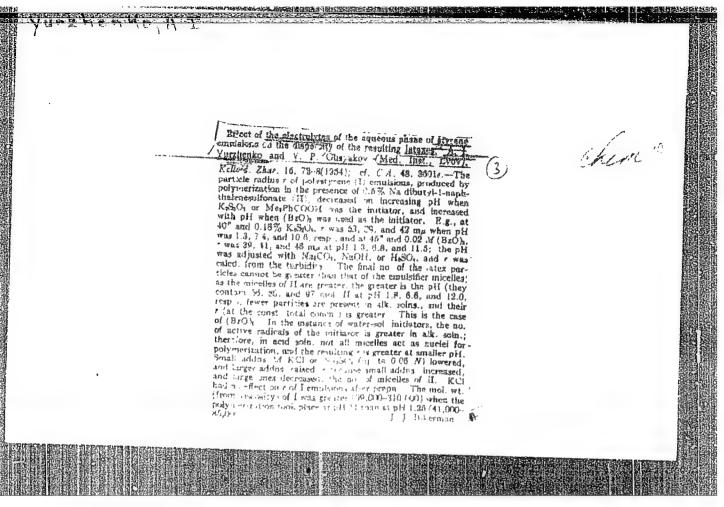
1. L'vovskiy gosudarstvennyy universitet imeni I. Franko. Kafedra fizicheskoy i kolloidnoy khimii. (Polymers and polymerization) (Emulsions)



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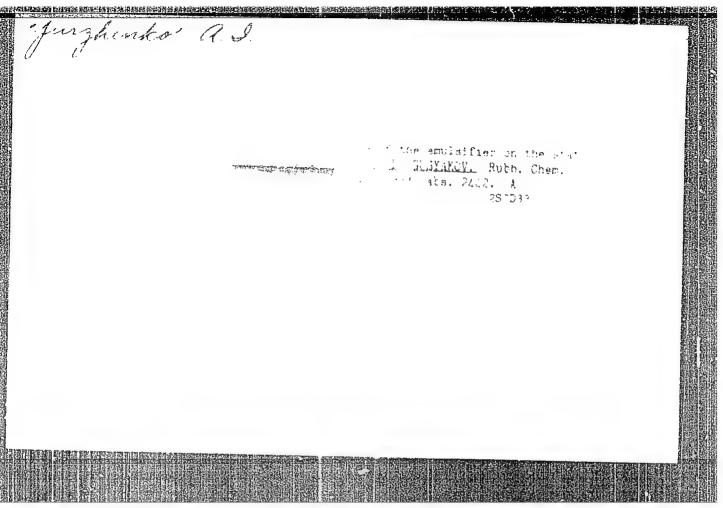




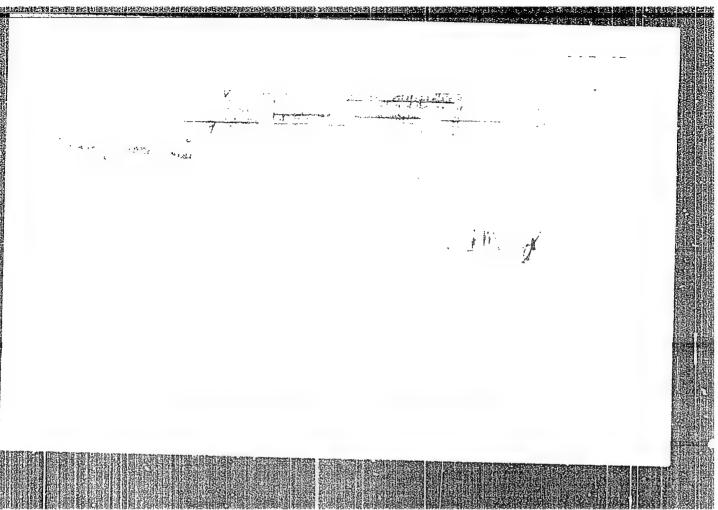


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APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001963220019-8"

YURZHENKO, T.S.: YURZHENKO, A.I.

polymerization in emulsion and on the dispersion of styrene latexes. Nauk.zap.L'viv.un. 34:15-25 55-00. 9 (MLRA 9:10)

(Polymers and polymerization) (Styrene) (Latex)

Catogory: USSR/Atomic and Molecular Physics - Physics of High-D-9 Molecular Substances.

Abs Jour : Ref Zhur - Fizika, No 3, 1957, No 6466

Author \* Yurzhenko, A.I., Martynyuk-Lototskiy, Yu.Ye.

Title : Investigation of the Elasto-Viscous Froperties of Solutions

of Synthetic Rubbers.

Orig Pub : Nauk zap. L'vivs'k, un-tu, 1955, 34, 30-38

Abstract : For the purpose of clarifying the effect of molecular structure and the chemical composition of a polymer on its deformation properties in solution, the latter were investigeted in solutions of rubbers of verious chemical nature (natural rubbers, as well as polystyrols with various moleculer weights) and synthetic rubbers (poly-isobutylene, butadieno-styrol, end nitryl rubbors). The investigation was carried out with the Shvedov appeartus. It was shown that the composition of the macromolocules affects substantially the clasto-viccous proporties and the structurization of the solutions of polymers, and also the viscosity of solutions that have no elestic properties.

Card : 1/1

#### CIA-RDP86-00513R001963220019-8 "APPROVED FOR RELEASE: 09/19/2001

Yurzhanko

USSR/Thermodynamics - Thermochemistry. Equilibria.

B-8 Physical-Chemical Analysis. Phase Transitions.

Abs Jour : Referat Zhur - Khimiya, No 6, 1957, 18530

Author : A.I. Yurzhenko, V.D. Yenal'yev.

: Lvov University. Inst

Allenning.

Title Study of Distribution of Isppropylbenzene Hydroperoxide

between Styrene and Water Phases.

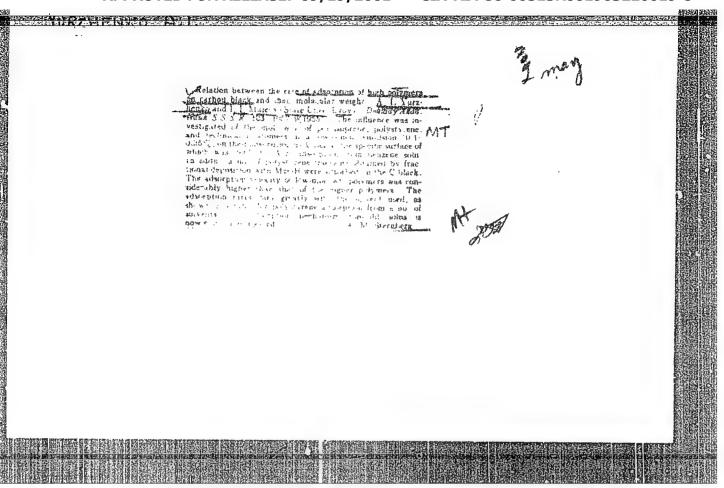
\text{Vol. No.4.} \text{: Nauk. zap. L'vivs'k. un-tu, 1955, 34, \dagger\text{45-50}} Orig Pub

Abstract The distribution of isopropylbenzene hydroperoxide (I)

between the styrene and water phases at 200, 350 and 430 was studied. The distribution factor (K) describing the ratio of molar parts of I in the water phase and in styrene decreases with the temperature rise from 0.0639 at 20° to 0.0314 at 43°. Addition of small arounts of NaOH (0.001 to 0.025 n.) causes a decrease of K due to sal-

ting out, but at the increase of NaOH concentration to O.1 n., K rises due to the formation of a I salt soluble

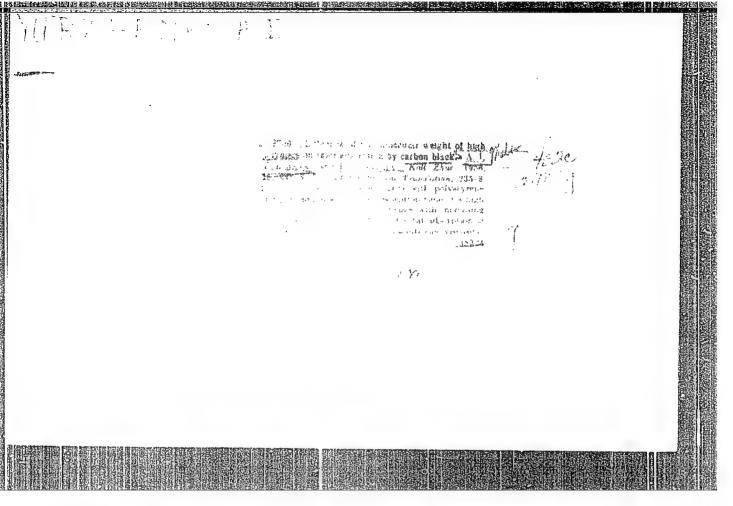
in water. Addition of Na<sub>2</sub>CO<sub>3</sub> and K<sub>2</sub>SO<sub>4</sub> causes salting - 209 - out of I and a decrease of K. Card 1/1



YURZHENKO, A. I.; Gusyakov, V. P.

"Dispersion of Synthetic Latexes in connection with the Concentration of Micelle Emulsifier" (Dispersnost' sinteticheskikh lateksov v svyazi s kontsentratsiyey mitsell emul'gatora) from the book <u>Trudy of the Third All-Union Conference on Colloid Chemistry</u>, pp420-428, Iz. AN SSSR, Moscow, 1956

(Report given at above Conference, Minsk, 21-4 Dec 53)



USSR/Chemistry of High Molecular Substances.

F

Abs Jour: : Referat Zhurnal Khimiya, No 6, 1957, 19442.

Author

N.S. Tsvetkov, A.I. Yurzhenko.

Inst. Title

Influence of Inorganic Salts on Process of Polymeri-

zation of Styrene in Emulsion.

Orig Pub : Kolloid, Zh., 1956, 18, No 3, 362-368.

Abstract

The influence of Na<sub>2</sub>SO<sub>4</sub> and KCl (in quantities of up to 0.1 - 0.02 g-equ/l) on the speed of the emulsion polymerization of styrene in presence of initiators -  $K_2S_2O_8$ , dimethylphenylcarbinol hydroperoxide (I) and benzoyl peroxide (II) - and of the emulsifier saltless Nekal, as well as their influence on the molecular weight of the polymere were studied by the dilatometric and viscosimetric methods. The polymerization speed curves in presence of  $K_2S_2O_8$  and I depending on the concentration of salts possess a maximum (at 0.02 - 0.03 g-equ/l) that is the sharper the higher the con-

Card 1/2

-18-

USSR/Chemistry of High Molecular Substances.

F

Abs Jour : Referat. Zhurnal Khimiya, No 6, 1957, 19442.

centration of the initiator and Ph of the aqueous phase are. The authors explain the discovered phenomena by the influence of salts on the colloidal solubility of the monomere. In presence of II, the salts do not influence the polymerization speed within the limits of the studied concentrations. The molecular weight curve of polystyrene depending on the salt content in the polymerized mixture also passes through a maximum corresponding to the salt concentration of 0.01 = 0.04 g-equ/1.

Card 2/2

-19-

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001963220019-8 Category: USSR/Chemistry of High-Molecular Substances F.

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 30899

Author : Kucher R. V., Yurzhenko A. I.

Inst : not given

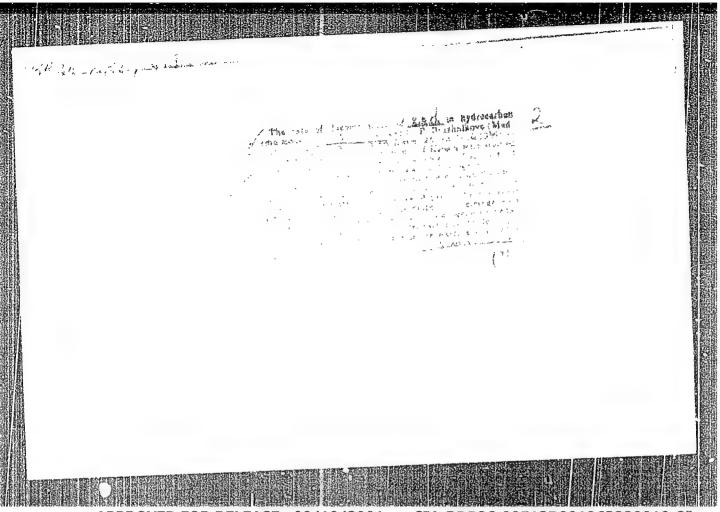
Title : Rate of Decomposition of Isopropyl-Benzene Hydroperoxide in

Aqueous Solutions of Emulsifying Agents

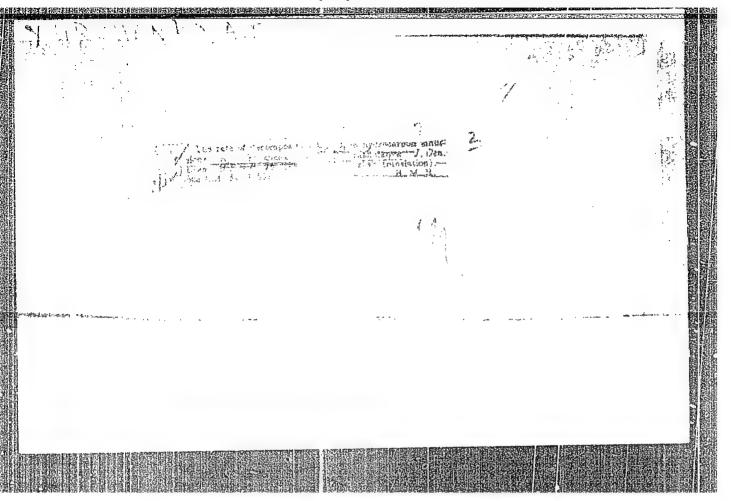
Orig Pub: Kolloid. zh., 1956, 18, No 5, 555-561

Abstract: Thermal decomposition of isopropyl-benzens hydroperoxide (I) in aqueous solutions, at 98.5°, conforms to the 1-st order. Rate of decomposition of I increases in the presence of acids and bases, and also on addition of emulsifiers (K-stearate and laurate, Na-oleate). Addition of Nekal accelerates decomposition in acid medium, and retards it in alkaline: on increase of nekal concentration in aqueous solutions from 0 to 3% decomposition velocity constant of I (K · 10° min ) increases from 11.4 to 31.4 at pH 0.9, from 0.183 to 0.336 at pH 5.8, and decreases from 1.57 to 0.974 at pH 9.9. Change in order of re-

Card : 1/2



APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001963220019-8"



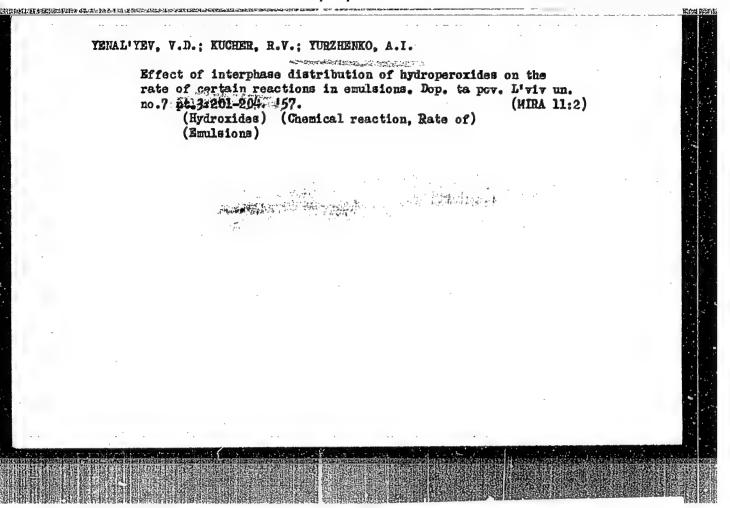
APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001963220019-8"

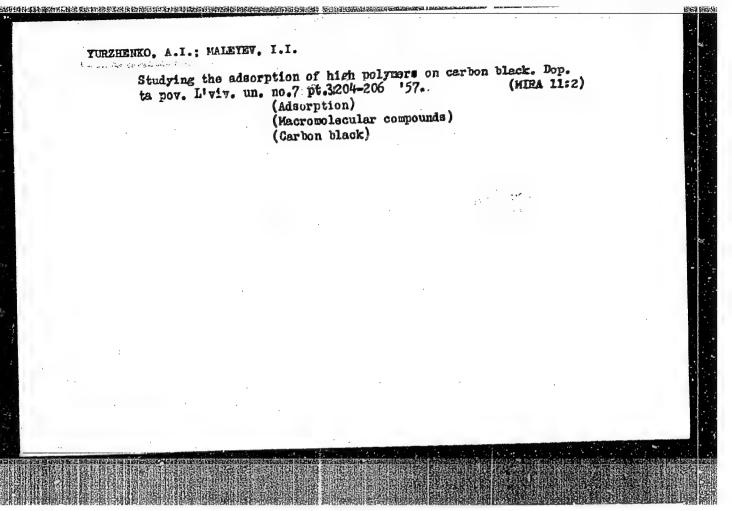
TURZHENKO, A.I.; YENAL'YEV, V.D.

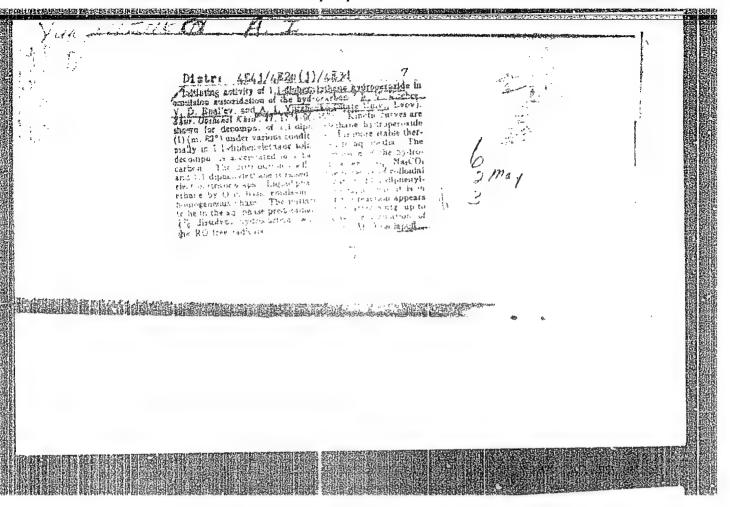
Interaction between organic hydroperoxides and ferrous salts.

Dop. ta pov. L'viv. un. no.? pt.3:195-197 '57. (MIRA 11:2)

(Chemical reaction, Rate of;
(Hydroxides) (Iron salts)







YURZHENKO, A.I.

Kucher, R. V., Yurzhenko, A. I., Kovbuz, M. A.

The Oxidation of Cumene by Molecular Oxygen in Emulsions in the AUTHORS: 11% .

the Presence of Various Emulsifiers (Okisleniye kumola molekulyarnym kislorodom v emul'siyakh v prisutstvii

razlichnykh emuligatorov).

Doklady AN SSSR, 1957, Vol. 117, Nr 4, pp. 638-640 (USSR)

The present report studies the velocity of the oxidation re-PERIODICAL: ferred to in the title in connection with the ratio of the ABSTRACT:

phases and with the nature of the used emulsifiers. The purified hydrocarbon was oxidized in glass retorts by bubbling pure oxygen in a thermostat at 80°C. Specimens for the analysis with respect to the content of hydroperoxide were taken

in certain intervals from the reaction mixture. The cumene--phase was further analyzed with respect to the total output of carbonyl compounds. A diagram illustrates the kinetic curves of the output of hydroperoxide of cumene at different

ratios of the phases with lacking emulsifier. It results from these data that an increase of the volume of the acqueous phase considerably increases the velocity of accumulation of

the hydroperoxide of cumene. These data can also be checked

in other systems and show among other things the following: Card 1/ 3

TITLE:

APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963220019-8

20-4-26/52

20-4-26/52

The Oxidation of Cumene by Molecular Oxygen in Emulsions in the Presence of Various Emulsifiers.

The acqueous phase is the essential kinetic factor in the oxidation of hydrocarbons in the emulsions, since it acts as initiation zone of the process and the hydroperoxides are produced in it. The importance of the acqueous phase for the emulsionlike oxidation still increases substantially in the presence of colloidal electrolytes (emulsifiers) containing a surface-active anion. The emulsifiers accelerate the production of the hydroperoxides at otherwise equal conditions. In the emulsionlike oxidation of the hydro-carbons the initiation of the reaction and the production of hydroperoxide occur mainly in the acqueous phase. The primary initiation of the processes discussed here consists in the production of free hydrocarbon-radicals. Besides the specific influence of the emulsifier on the decay of hydroperoxide of cumene the solubility of the hydroperoxide in the acqueous phase connected with this process must also be taken into account. There are 2 figures, 1 table, and 6 references, 3 of which are Slavic.

ASSOCIATION:

State University imeni Iv. Franko, L'vov (L'vovskiy gosudarstvennyy universitet imeni Iv. Franko).

Card 2/3

The Oxidation of Cumene by Molecular Oxygen in Emulsions in 20-4-26/52 the Presence of Various Emulsifiers.

PRESENTED:

May, 21, 1957, by P. A. Robinder, Academician.

SUBMITTED:

May 3, 1956

AVAILABLE:

Library of Congress

Card 3/3.

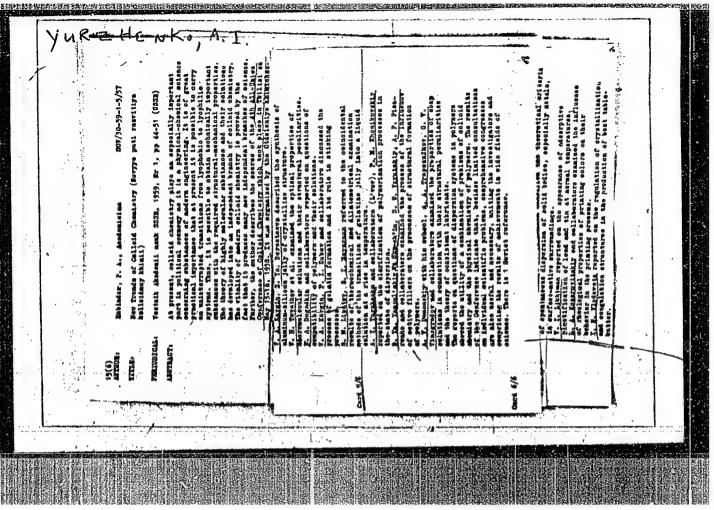
YURZHENKO, A. I., and KHOMIKOVSKIY, P. M.,

"The mechanism of emulsion polymerization."

report presented at the Fourth All-Union Conference on Colloidal Chemistry,
Tbilisi, Georgian SER, 12-16 May 1958 (E011 chur, 20,5, p.677-9, '58, Tanbaan, A.2)

#### "APPROVED FOR RELEASE: 09/19/2001

#### CIA-RDP86-00513R001963220019-8



APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001963220019-8"

YURZHENKO, A. I. and MALEYEV, I. I.

(Lvov State Franka University, Lvov, USSR)

"Adsorption of Certain High Polymers by Carbon Black in Dilute Solutions," paper submitted at Soviet High-Polymers, Intl. Conference, Nottingham, Uk,m 21-24 July 1958.

E-3,109,661

#### CIA-RDP86-00513R001963220019-8 "APPROVED FOR RELEASE: 09/19/2001

5(2), 5(4)AUTHORS:

Ivanchov, S. S., Yurzhenko, A. I.

507/153-58-4-3/22

TITLE:

Thermal Decomposition of Potannium Pernulfute in the Proponce of Salts of the Acids of the Alighatic Series (Termicheskoye razlozheniye persul'fata kaliya v pri-

sutstvii soley kislot zhirnogo ryada)

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1958, Nr 4, pp 13 - 18 (USSR)

ABSTRACT:

Potassium persulfate is an "active" initiator of polymerization processes in emulsions, which is

widely used in industry products of a free-radical type are formed in its thermal decomposition. In this connection more and more attention is paid to the

kinetics and process of that decomposition, in dependence on the conditions. A survey of the publications so far available is presented (Refs 1-3). The influence

exercised by salt additions on the decomposition rate of potassium persulfate is interesting, because in practical use the decomposition takes place in the

Card 1/4

PROVED FOR RELEASE: 09/19/2001

Thermal Decomposition of Potassium Persulfate in the Presence of Salts of the Acids of the Aliphatic Series

507/153-58-4-3/22

presence of various salts. Accurate data on the influence of the salts mentioned in the title are not available. In the present paper the influence is investigated that is exercised by sodium salts of low fatty acids (from formiate to laurate) upon the polymerization kinetics in the emulsion, if the polymerization was initiated by potassium persulfate. Furthermore, the influence is investigated that is exerted by the above salts upon its decomposition rate (this is the only subject of this report) and the colloidal. properties of the emulations. Figure t presents experimental results of the decomposition of potassium persulfate in aqueous solutions a) without additions and b) in the presence of salts of fatty acids of various concentrations. As may be seen (Curves 1-3), the decomposition rate of the persulfate increases with increasing sodium-formiate concentration within the whole range of the concentrations investigated. When the next salt - sodium acetate - is introduced, the decomposition rate of the persulfate is increased only to

Card 2/4

Thermal Decomposition of Potassium Persulfate in the SOV/153-58-4-3/22 Presence of Sults of the Acids of the Aliphatic Series

the concentration of the acetate of O, O2N. Further additions of acetate slow down the decomposition the more, the higher the acetate concentration is. That applies for all other salts up to capronate incl. If sodium caprylate and salts of higher acids are introduced, the persulfate decomposition in all concentrations is accelerated, i. e. the more, the higher the concentration of the additions introduced has been. The authors have come to the conclusion that the salts investigated can exercise different effects in concentrations above O 02N. These effects depend on the length of the hydrocarbon radical of the anion: the lower salts (up to capronate) slow down the decomposition when large additions are introduced, whereas the decomposition is accelerated by higher ones; sodium formiate shows an anomalous behavior. If the anion radical is lengthened, the persulfate decomposition is accelerated in any case by introducing small quantities of salt. The above mentioned influence is explained by two effects: 1) By a

Card 3/4

Thermal Decomposition of Potassium Persulfate in the Presence of Salts of the Acids of the Aliphatic Series

> purely chemical, which is connected with the interaction between the salt and the persulfate, and leads to accelerated decomposition; 2) By the salt-effect which is analogous to that of inorganic salts and slows down the decomposition (in increased concentrations). The latter effect (2<sup>nd</sup>) is decreased, if the hydrocarbon radical of the salt anion is lengthened, and is no longer visible above caprylate. The behavior of formiate requires further investigations. There are 4 figures, 6 tables, and 4 references, 2 of which are Soviet.

ASSOCIATION:

L'vovskiy gosudarstvennyy universitet (L'vov State University) Kafedra fizicheskoy i kolloidnoy khimii (Chair of Physical

and Colloidal Chemistry)

SUBMITTED:

September 16, 1957

Card 4/4

APPROVED FOR RELEASE: 09/19/2001

AUTHORS:

Yurzhenko, A.I., Storozh, G.F.

SOV-69-20-5-5/23

TITLE:

The Effect of Ethylene Glycol on the Colloid Properties of Aqueous Sodium Oleate Solutions (Vliyaniye etilenglikelya na kolloidnyye svoystva vodnykh rastvorov oleata natriya)

PERIODICAL:

Kolloidnyy zhurnal, 1958, Vol XX, Nr 5, pp 550-555 (USSR)

ABSTRACT:

The addition of alcohols, e.g. methyl, ethyl, n-butyl, and iscamyl alcohol, to aqueous sodium oleate solutions, increases the turbidity and viscosity of these solutions. The addition of ethyleneglycol to these solutions is investigated in the article. Figure 1 shows that the viscosity of scap solutions increases with the content of ethylere glycol. The curves for the changes of the relative viscosity of 0.1 M solutions of sodium oleate, depending on the concentration of ethanol and ethyleneglycol, are shown in Figure 2,a. The measurements of the specific electroconductivity are presented in Figure 3. The addition of ethylene glycol reduces the electroconductivity, but at maximal viscosity the electroconductivity reaches a constant vilue. The turbidity curves of the solutions are given in Figure 5. The turbidity decreases rapidly after addition of alcohols, attains a maximum, and decreases again. This fact is in accordance with the theory that the alcohol causes a dehydration of

Card 1/2

The Effect of Ethylene Glycol on the Colloid Properties of Aqueous Sodium

the solutions. An increase of the NaOH content decreases the turbidity and at a concentration of alkali of 0.0005 mole/l hydrolysis of the oleate is completely suppressed (Figure 6). The dependence of the turbidity on the sodium oleate concentration in the presence of various quantities of ethanol and glycol is shown in Figure 7. It is evident that alcohols decrease the turbidity of soap solutions without suppressing hydrolysis. Ethanol and glycol, like alkalis, lower the critical concentration of sodium oleate micelle formation. There are 9 graphs and 9 references, 2 of which are Soviet, 3 German, 2 English, and 2 Swedish.

ASSOCIATION:

L'vovskiy universitet im. Iv. Franko (L'vov University im.

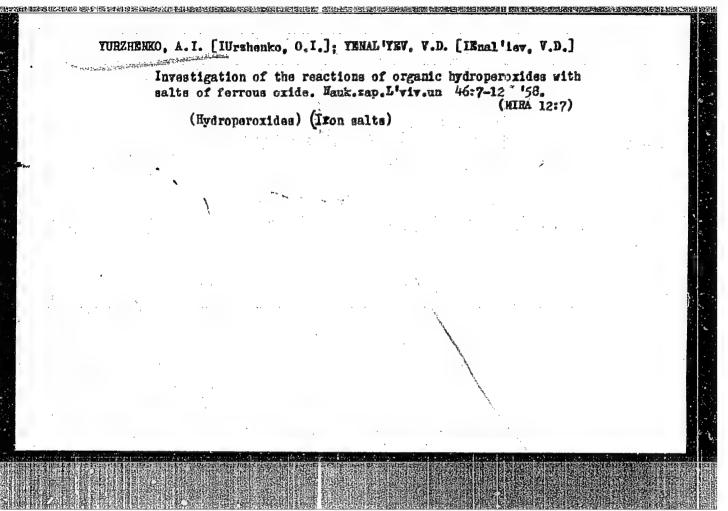
SUBMITTED:

December 24, 1957

1. Sodium solutions--Colloids 2 Sodium solutions--Properties

3. Ethylene glycols--Chemical reactions

Card 2/2



KUCHER, R.V.; YURZHENKO, A.I. [IUrshenko, O.I.]; KOYBUZ, M.O.

Heans of accelerating the oxidation reaction of isopropylbenzene in the liquid phase. Mauk.zap.L'viv.un. 46:17-20 '58.

(AIRA 12:7)

(Cumene) (Oxidation)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001963220019-8"

YENAL'IEV, V.D. [IEnal'iev, V.D.]; YURZHENKO, A.I. [IUrzhenko, O.I.]

Effect of the relationship of phase to the kinetics of redox polynorization in enulaions. Mauk.sap.L'viv.un. 46:21-25 '58.

(Polymerization)

(Polymerization)

YENAL'YEV, V.D. [IEnal'iev, V.D.]; YURZHEIKO, A.I. [IUrzhenko, O.I.]

Biffect of the concentration of the initiating system on the kinetics of redox polymerization in emulsions. Mauk.zap.L'viv.un 46: 26-33 '58. (Folymerization)

(Folymerization)

GUSYAKOV, V.P. [Kusiakov, V.P.]; YURZHENKO, A.I. [IUrshenko, O.I.]

Effect of saturated alighatic alcohols on the scattering light by protein solutions and on their viscosity. Naukzap.L'viv.um. (MIRA 12:7)

(Alcohols) (Viscosity) (Proteins-Optical properties)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001963220019-8"

Adsorption of polystyrene, methyl nethacrylate polymers, and methyl acrylate polymers on carbon black. Mauk.zap.L'viv.un. 46: 43-47 '58. (MIRA 12:7)

(Polymers) (Adsorption) (Carbon black)

YURZHENKO, A. I. [IUrzhenko, O.I.]; STOROZH, G.F. [Storozh, H.F.]

Effect of lower aliphatic alcohols on the colloidal properties of sodium oleate solutions. Nauk.zap.L'viv.un. 46:48-52 \*58.

(MIRA 12:7)

(Colloids) (Alcohols)

KUCHER, R.V.; YENAL'YEV, V.D. [IEnal'iev, V.D.]; YURZHENKO, A.I., [IUrzhenko, O.I.], Kovbuz, M.O.

Effect of the molecular weight of tertiary hydrocarbons on their oxidizability in the liquid phase and in emulsions. Nauk. their oxidizability in the liquid phase and in emulsions. Nauk. their oxidizability in the liquid phase and in emulsions. Nauk. their oxidizability in the liquid phase and in emulsions. Nauk. their oxidizability in the liquid phase and in emulsions. Nauk. their oxidizability in the liquid phase and in emulsions. Nauk. their oxidizability in the liquid phase and in emulsions. Nauk. their oxidizability in the liquid phase and in emulsions. Nauk. their oxidizability in the liquid phase and in emulsions. Nauk. their oxidizability in the liquid phase and in emulsions. Nauk. their oxidizability in the liquid phase and in emulsions. Nauk. their oxidizability in the liquid phase and in emulsions. Nauk. their oxidizability in the liquid phase and in emulsions. Nauk. their oxidizability in the liquid phase and in emulsions. Nauk. their oxidizability in the liquid phase and in emulsions. Nauk. their oxidizability in the liquid phase and in emulsions. Nauk. their oxidizability in the liquid phase and in emulsions. The liquid phase and in emulsions are considered to the liquid phase and in emulsions. The liquid phase are considered to the liquid phase and in emulsions are considered to the liquid phase and in emulsions are considered to the liquid phase and in emulsions are considered to the liquid phase and in emulsions are considered to the liquid phase and the liquid phase are considered to the liquid phase are consider

TURZHENKO, A.I. [IUrshenko, O.I.]; IVANDHCHOV, B.S.

Tolymerization of styrene in an emulsion in the presence of sodium salts of lower aliphatic acids. Hank.sap.Liqiv.un. 46:
161-167 '58.
(Styrene) (Polymerization)
(Sodium salts)

Yurzhenko, A. I., Ivanchov, S. S.

sov/ 20-120-2-35/63

AUTHORS:

TITLE:

Influence of the Salts of the Lower Fatty Acid Series Upon Exulsion Polymerization (Vliyaniye soley ryada nizshikh zhirnykh

kislot na emul'sionnuyu polimerizatsiyu)

PERIODICAL:

Doklady Akademii nauk SSSR, 1958, Vol. 120, Nr 2,

pp. 349 - 352 (USSR)

ABSTRACT:

First, reference is made to a number of pertinent papers published previously. The influence of the sodium salts of the series of lower fatty acids ranging from sodium acetate to sodium laurate upon the polymerization of styrene in emulsion is investigated. The initial styrene (which is by 99,8% a monomer) was treated with a 20% solution of NaOH. It was stored on metallic sodium for some time and then sublimed in vacuum. The data documenting the influence in question upon the polymerization velocity are given in a diagram. The introduction of small amounts of salt (up to a concentration of 0,02 H) increases the reaction velocity. At concentrations above 0,02 H the introduction of the electrolyto has a varying effect

Card 1/3

ROVED FOR RELEASE: 09/19/2001

RDP86-00513R001963220019-8

Influence of the Salts of the Lower Fatty Acid Series SOV/20-120-2-35/63
Upon Emulsion Polymerization

according to the nature of the anion. The lower homologs including sodium capronate show an increase of polymerization velocity whom malte are added to the polymerization system. When the concentration 0,02 M is exceeded polymerization is retarded. Further details are given. The salts of the fatty acids belong to two groups according to their influence upon the polymerization process: 1) Salts of the lower fatty acids (from the acetate to the capronate). They give the highest polymerization velocity, according to the concentration. 2) The salts of the higher fatty acids (above capronate). The reaction velocity increases continuously with the concentration of the salt in the reaction mixture. The influence of these salts upon the molecular weight of the resulting polymers is similar. The influence of such additions of salts upon the initiation velocity is discussed. In the homolog series of the salts up to capronate the effect of salting out upon the emulgator predominates. Hence, the polynorization velocity and the initiation velocity are gradually reduced. With the salts of caprylic acid and of higher acids the stabilizing effect predominatou.

Card 2/3

Influence of the Solts of the Lower Petty Acid Series S0V/20-120-2-35/63
Upon Emulsion Folymerization

There are 4 figures and 6 references, 3 of which are Soviet.

ASSOCIATION: L'vovskiy gosudarstvennyy universitet im. Ivana Franko (L'vov

State University imeni Ivan Franko)

PRESENTED: January 13, 1958, by P.A.Rebinder, Member, Academy of Sciences,

USSR

SUBMITTED: January 13, 1958

1. Styrenes-Polymerization 2. Fatty acids-Chemical properties

Card 3/3

SOV/20-123-2-32/50 Yurzhenko, L. I. Ivanova, N. Ya., 5(4) AUTHORS: Yenal'yev, V. D.

The Participation of the Emulsifier in the Oxidation Reduction Initiation of Emulsion Polymerization (Uchastiye emul'gatora v okislitel'no-vosstanovitel'nom initsiirovanii emul'sionnoy TITLE: polimerizatsii)

Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 2, pp 324-326 PERIODICAL:

One of the most important factors influencing the kinetics of polymerization in emulsions is the nature of the emulsifying agent. The nature of the emulsifier used influences not only the velocity of the polymerization process but also the properties of the polymer formed. When investigating emulsion polymerization in the presence of various emulsifiers, the authors noticed several particularities in the development of the polymerization process in connection with the application of cetyl pyridine bromide. In this case the part of the emulsifier is played not only by a purely colloidochemical factor. Investigation was carried out by the dilatometric method in a

dilatometer which prevents contact between the polymerization Card 1/4

APPROVED FOR RELEASE: 09/19/2001

ABSTRACT:

CIA-RDP86-00513R001963220019-8

The Participation of the Emulsifier in the Oxidation SOV/20-123-2-32/50 Reduction Initiation of Emulsion Polymerization

system and air. In the case of all experiments, the ratio between the hydrocarbon- and the aqueous-phase was 1:9. The hydroperoxide of isopropyl benzene served as initiator, and styrene was used as monomer. Polymerization kinetics was investigated at various temperatures. In the course of one of the test series sodium carbonate was introduced into the aqueous phase. The results obtained by the experiments are shown in a diagram. Conditions otherwise being equal, polymerization develops much more rapidly than if other classes of emulsifiers are used. Cetyl pyridine bromide warrants sufficiently rapid polymerization also at low temperatures (4 and 18°), which is not the case with other emulsifiers. If sodium carbonate is present in the aqueous phase, polymerization velocity passes through a maximum at increased temperatures. In the course of experiments carried out without sodium carbonate, polymerization increases with rising temperature, in which case linear dependence is conserved up to a rather high degree of polymerization. An addition of sodium carbonate and an increase of temperature acts in the same direction (increase of polymerization velocity). The velocity

Card 2/4

The Participation of the Emulsifier in the Oxidation SOV/20-123-2-32/50 Reduction Initiation of Emulsion Polymerization

of the polymerization process is due to the velocity of initiation. The decay of isopropyl benzene hydroperoxide in an aqueous solution is considerably accelerated by the introduction of cetyl pyridine bromide also if Na<sub>2</sub>CO<sub>3</sub> is lacking.

This decay is still more accelerated if cetyl pyridine bromide and sodium carbonate are present at the same time. Data concerning the kinetics of this decay at various conditions are given by a diagram. An increase of temperature increases the initial velocity of polymerization and reduces the final yield of the polymer. Also an addition of sodium carbonate produces the same effect. A comparison between these and other data makes it possible to draw the following conclusion: The surface-active emulsifier may play a double rôle in emulsion polymerization: Firstly, it may act as an ordinary emulsifier stabilizing the original emulsion of the monomer, and, secondly, the emulsifier may have the functions of a polymerization activator by causing an induced decay of the hydroperoxide. There are 4 figures and 7 references, 4 of which are Soviet.

Card 3/4

The Participation of the Emulsifier in the Oxidation SOV/20-123-2-32/50 Reduction Initiation of Emulsion Polymerization

ASSOCIATION:

L'vovskiy gosudarstvennyy universitet im. Ivana Franko

(L'vov State University imeni Ivan Franko)

PRESENTED:

July 3, 1958, by P. A. Rebinder, Academician

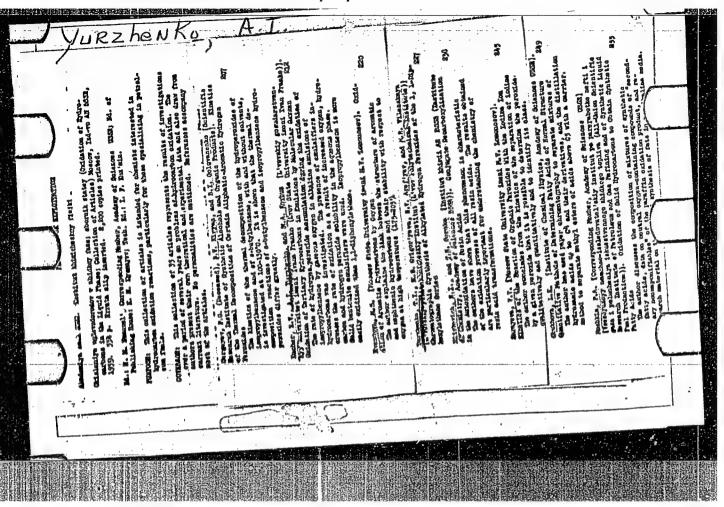
SUBMITTED:

May 16, 1958

Card 4/4

"Some Peculiarities in the Course of Chain Reactions in Hydrocarbon Emulsions Stabilized by Surface-active Emulsifiers."

report presented at the Section on Colloid Chemistry, VIII Mendeleyev Conference of General and Applied Chemistry, Moscow, 16-23 March 1959. (Koll. Zhur. v. 21, No. 4, pp. 509-511)



5(2)

507/21-59-1-16/26

AUTHORS:

Kucher, R.V., Storozh, G.F., and Yurzhenko, A.I.

TITLE:

The Viscosity of Water Solutions of Sodium Oleate in the Presence of Some Alcohols. (Vyazkost' vodnykh rastvorov oleata natriya v prisutstvii nekotorykh

spirtov).

PERIODICAL:

Dopovidi Akademii nauk Ukrains'koi RSR, 1959, Nr 1,

pp 60-63 (USSR)

ABSTRACT:

The water solutions of soaps are usually characterized by means of the so-called first and second critical concentrations of the formation of micelles. It was proved in the described experiment, that apart from the critical micelles concentrations CMC-1 and CMC-2, there exists one intermediate concentration which can be quite accurately determined from the minimum of the concentration curves of a given specific viscosity. Small quantities of alcohols (ethyl,

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SOV/21-59-1-16/26

The Viscosity of Water Solutions of Sodium Oleate in The Presence of Some Alcohols.

n-butyl, isoamyl, ethylen-glycol and glycerine) in solution lowered the middle critical concentration, and larger quantities raised it. Experiments have confirmed the theoretical data contained in the referred literature and, therefore, the authors recommend it for guidance. There are 3 graphs and 9 references, 2 of which are Soviet, 2 German, 1 Scandinavian, 2 Japaness, and 2 American.

ASSOCIATION: L'vovskiy gosudarstvennyy universitet im Iv.Franko (The L'vov State University imeni Ivan Franko)

PRESENTED: July 19, 1958, by A.V. Dumanskiy, Member of the AS UkrSSR

Card 2/2

5(4)

SOV/69-21-3-12/25

AUTHORS:

Kucher, R.V., Yurzhenko, A.I., Kovbuz, M.A.

TITLE:

Some Emulsifiers as Kinetic Factors of Cumene Oxidation

in Emulsions

PERIODICAL:

Kolloidnyy zhurnal, 1959, Vol XXI, Nr 3, pp 309-314

(USSR)

ABSTRACT:

The authors report on the effect of a number of emulsifiers (potassium palmitate, Nekal, Leucanol and cetyl pyridine bromide) on the kinetics of oxidation of cumene (isopropylbenzene)(IPB) and on the yield of hydroperoxides (HPC). The maximum rate of oxydation of IPB in emulsion and the maximum yield (70-80%) of HPC were obtained with a 0.5-1% potassium palmitate concentration. Nekal and Leucanol also speed up the accumulation of HPC (~70%), but this process is delayed by a certain period of induction. The effect of Nekal, like that of other colloidal electrolytes, is connected

Card 1/2

to a considerable extent with the change of the rate

 Some Emulsifiers as Kinetic Factors of Cumene Oxidation in

of decomposition of HPC in the presence of these substances. The effect of the emulsifiers on the rate of oxidation of IPB depends in the main on their colloidal properties (micelle formation, colloid solubility). The cation active emulsifier cetyl pyridine bromide, if introduced into the initial oxidation mixture, noticeably delays the process of HPC accumulation. The introduction of 0.1% cetyl pyridine bromide 30 hours after the initiation of the process stimulates the reaction. In this case, the yield of HPC reaches nearly 80%. The authors mention the Soviet scientists K.I. Ivanov and N.M. Emanuel'. There are 5 graphs, 2 tables and 11 references, 8 of which are Soviet and 3 English.

ASSOCIATION: L'vovskiy universitet (L'vov University)

SUBMITTED: 14 September, 1957

Card 2/2

S/081/61/000/020/076/089 B106/B147

AUTHORS:

Kucher, R. V., Kovbuz, M. A., Yurzhanko, A. I.

TITLE:

Decomposition of isopropyl benzene hydroperoxide during hydrocarbon oxidation in a homogeneous liquid phase or in an

emulaion

PERIODICAL:

Referativnyy zhurnal. Khimiya, no. 20, 1961, 321, abstract 20L46 (8b. nauchn. rabot. In-t Fiz.-organ. khimii AN BSSR,

no. 8, 1960, 22-31)

TEXT: The conversion degree of isopropyl benzene (I) into hydroperoxide (HP) at different oxidation degrees of this hydrocarbon was investigated. HP was found to be the only oxidation product in the initial stage of reaction. When the oxidation takes place in an emulsion, the reaction is more intense, and higher concentrations of HP are reached. A study of HP decomposition during the oxidation of I in a homogeneous liquid phase or in an emulsion indicated that rate and mechanism of HP decomposition vary with the degree of oxidation. When the oxidation takes place in an emulsion, the HP decomposition in the olsophase has a similar course as

Oard 1/2

Decomposition of isopropyl ...

B/081/61/000/020/076/089 B106/B147

during the oxidation in a homogeneous liquid phase, and the rate constant of HP decomposition drops with progressing reaction. In the aqueous phase, the decomposition of HP is monomolecular throughout the oxidation of cumene in an emulsion, and the decomposition constant rises with increasing degree of oxidation. If the oxidation in a homogeneous liquid phase is stimulated with cobalt stearate, the decomposition rate of HP rises, and by-products of the reactions are formed in a large quantity. After the precipitation of the catalyst, monomolecular decomposition sets in. The results of the investigation can be explained well by a radical chain mechanism of HP decomposition. [Abstracter's note: Complete translation.]

Card 2/2

 YURZHENKO, A.I.; IVANCHOV, S.S.; ZARECHNYUK, O.S.

Gomparative initiating activity of peroxides of phenylcarboxylic acids in the polymerization of styrens. Soor. nauch. rab. Inst. fiz.-org. khim. AN ESSR no. 8:63-69 '60. (MIRA 14:3)

1. L'vovskiy gosudarstvennyy universitet im. I. Franko. (Styrens) (Peroxides) (Polymerization)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001963220019-8"

s/081/62/000/012/061/063 B158/B101

AUTHORS:

Yurzhenko, A. I., Ivanchov, S. S., Zarechnyuk, O. S.

TITLE:

Comparative initiating activity of diacyl peroxides of the

paraffin series during polymerization of styrene

PERIODICAL:

Referativnyy zhurnal. Khimiya, no. 12, 1962, 661, abstract

12R42 (Sb. nauchn. rabot. In-t fiz.-organ. khimii AN BSSR,

no. 8, 1960, 70-75)

TEXT: A study was made of the dependence of the initiating activity (IA) of symmetric diacyl peroxides of the fatty series: peroxides of dienanthyl (I), dicaprilyl (II), dipelargonyl (III), dicaprinyl (IV), dilauryl (V), dipelargonyl (VII) on the length of the hydrocarbon radical in the molecule. It is established that all the peroxides studied have identical thermal stability, but different IA, which is greater than in the case that the polymerization is initiated with benzoyl peroxide. The dependence of IA, which may be evaluated from the rate of polymerization of styrene, on the length of the organic radical chain of the peroxides studied is represented as a curve with a minimum.

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S/081/62/000/012/061/063
Comparative initiating activity of ... B158/B101

reduction in the length of the organic radical in the peroxide molecule in series V to I, an increase in the polymerization rate is observed; then increase is observed with lengthening of the hydrocarbon radical in the series V to VII. The intrinsic viscosity of the polymers did not depend on the length of the hydrocarbon radical of the peroxide and was determined only by the concentration of the latter. [Abstracter's note: Complete translation.]

Card 2/2

KUCHER, R.V.; KAZ'MIN, S.D.; YURZHENKO, A.I.

Some kinetic characteristics of the exulsion oridation of hydorearbons. Shor, nauch. rab. Inst. fiz.-org. khim. kn RSSR
no.8:132-137 '60. (MIRA 14:3)

1. L'vovskiy gosudarstvannyy universitet im. I. Franko. (Hydrocarbons) (Oxidation).

68701

\$/069/60/022/01/007/025 D034/D003

Ivanova, N.Ya. and Yurzhenko, A.I.

AUTHORS:

The Emulsion Polymerization of Styrene in the Presence

of Emulsifiers of Varying Molecular Weights TITLE:

PERIODICAL:

Kolloidnyy zhurnal, 1960, Vol XXII, Nr 1, pp 37-41 (USSR)

ABSTRACT:

This is a study of the effect of the molecular weight of emulsifiers (sodium salts of fatty acid fractions) on the rate of the emulsion polymerization of styrene and on the molecular weight of the polymer. The polymerization of styrene was carried out in dilatometers [Ref 3] in a water thermostat at 60° C. For all experiments the equation phase of the monomer: water pH of the system, in all cases 0.1 g-equ/1 Na<sub>2</sub>CO<sub>3</sub>

was introduced into the aqueous phase. The results of the study of the colloidal-chemical properties of the

Card 1/4

68701 \$/069/60/022/01/007/025 D034/D003

The Emulsion Polymerization of Styrene in the Presence of Emulsifiers of Varying Molecular Weights

most efficient emulsifiers will be given in a special paper in this journal. As polymerization initiator the authors used isopropyl benzene hydrogen peroxide with a content of 78% active oxygen. Its concentration was equal to 0.01 M with regard to the hydrocarbon phase. The rate of polymerization (Vn) in mole/l-hour was calculated according to the equation

$$Vn = \left[\begin{array}{cc} \Delta S/\Delta I & 1000 \text{ d.u.} \\ \hline 100 & M_0 \end{array}\right] \cdot J$$

(M - relative colume of the hydrocarbon phase; % - relative volume of the aqueous phase; dM - specific weight of the monomer at polymerization temperature; Mo - molecular weight of styrene; S - depth of polymerization

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68701 S/069/60/022/01/007/025 D034/D003

The Emulsion Polymerization of Styrene in the Presence of Emulsifiers of Varying Molecular Weights

(quantity of polymerized monomer in percent); [- time in hours; \DS/\DT- tangent of the angle of inclination of the kinetic curves for each emulsifier of the adopted homologous series). The investigation has shown that the rate of emulsion polymerization of styrene in the presence of the mentioned emulsifiers (molecular weight 166.2-336.0) increases linearly with an increase of the molecular weight of the emulsifier from 166.2 to 296.8. On further increase of the molecular weight of the emulsifier, the polymerization process, after having passed a maximum, slows down. For the given homologous series of emulsifiers the maximum corresponds to the mean length of the hydrocarbon portion of the soap C17 - C19. The retardation of the polymerization process is associated with change in the colloidal properties

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68701 \$/069/60/022/01/007/025 D034/D003

The Emulsion Polymerization of Styrene in the Presence of Emulsifiers of Varying Molecular Weights

> of the emulsifier, i.e., the size and shape of its micelles, which are the main sites of polymerization in emulsions. The formation of large asymmetric micellular aggregates hinders diffusion of the monomer in the micelle, leading to decrease in the reaction rate. Up to a given limit the intrinsic viscosity of polymer solutions increases with the molecular weight of the emulsifier. The authors express their gratitude to F.V. Nevolin, who put at their disposal the fatty acid fractions. There are 3 graphs, 1 table and 6 references, 4 of which are Soviet and 2 English.

ASSOCIATION: L'vovskiy universitet im. Ivana Franko (L'vov University imeni Ivan Franko)

SUBMITTED:

December 13, 1958

Card 4/4